



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,062	06/15/2001	Jan Medved	81862.P219	1703

7590 09/21/2005

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER

PIZARRO, RICARDO M

ART UNIT	PAPER NUMBER
----------	--------------

2662

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/883,062	MEDVED ET AL.	
	Examiner Ricardo Pizarro	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 June 2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-26 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 24-26 is/are allowed.
 6) Claim(s) 1-4,11,14,15 and 17-23 is/are rejected.
 7) Claim(s) 5-10, 12, 13, 16 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 15 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: For better reading of the specification, in page 9 line 21 replace "this block" with –this module-.

Appropriate correction is required.

Claim Objections

2. Claims 1-10, 20-23 are objected to because of the following informalities:

For better reading of the claims

In claim 1 line 5 replace "the broadcasts" with --the broadcasting of control cells--

In claim 2 line 1 replace "the said mapping" with --said mapping--

In claim 20 line 1 replace "a redirecting" with –redirecting--

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 and 19 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 the steps "broadcasting broadcast control cells" . " transmitting broadcast control cells to each port on each of the shelves " and forwarding the replicated broadcast control cells to all shelves" . The actions performed in these steps appear to be the same. i.e." broadcasting the cells" . , so it is not clear what the difference between them is.

In claim 19 the statement "facilitating the said mapping locally" is a vague statement, it is not clear what facilitating exactly refers to and it is not clear what is meant by "facilitating a mapping locally"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 20-23 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent No. 6,879,559 (Blackmon).

Regarding claim 20 , Blackmon discloses a Line card protection system using one for one redundancy comprising : a multi shelf switching fabric (Optical Internal Modules (Tx and Rx and Optical switch modules in Fig 1B , col 11 lines 23- 27) including a plurality of line interfaces (line shelves in Fig. 1a and 1C) , source line cards (Protect and Packet forwarding module cards 11-0P and 11-0W in Fig. 1A), destination line cards (Protect and Packet forwarding module cards 12-0P and 12-0W in Fig. 1C), a broadcast control mechanism which facilitates mapping (a master central processor that broadcast updates to the entire system , see step 12 in Fig. 6 col I3 lines 34-38) , mapping is accomplished without mapping of physical ports (mapping performed at the line cards is only logical mapping ,i.e. mapping is performed without physical elements, col 3 line 23)

Regarding claim 21, Blackmon discloses a distributed broadcast mechanism (a microprocessor in each shelf (upon detection of failure will reroute traffic col 5 lines 57-63)

Regarding claim 22, wherein the mapping is executed in a mufti-shelf switching environment (multiple shelves in the fabric, col 6 line 67)

Regarding claim 23, wherein mapping tables are updated by a fabric control cell mechanism (master central processor updates tables, col 13 lines 36-38).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,879,559 (Blackmon) in view of US patent No. 6,385,200 (Erami).

Regarding claim 1, Blackmon discloses a Router line card protection using one for N redundancy comprising broadcasting cells (transmitting packets) and transmitting them to each port on each of the shelves (broadcasting packets using multiple packet forwarding modules contained in each line shelf in Fig. 1A, col 3 lines 5 and 8 , col 5 lines 15-17, col 6 line 60) , and forwarding the replicated control cells to all shelves attached to the switching fabric, (packet chunks are **replicated** and transferred in parallel to IOM 14-0W1 and 14-1W1 , packets are send to all shelves through replication , col 6 lines 26-27).

Blackmon does not disclose the broadcasting specifically being broadcasting of fabric control cells, neither the broadcasting containing the current port mappings, as in claim 1.

However , Erami discloses Broadcast control system and switching node apparatus with broadcast cell routing capabilities in asynchronous mode network, comprising broadcasting of control cells to every destination in an ATM switching

network [col 2 lines 18-19], as in claim 1. Additionally ,Blackmon in a separate embodiment disclosed in Fig. 6 the broadcasting containing the current switching port mappings (Broadcast internal map update , see step 612 in Fig. 6) , as in claim 1.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention to modify Blackmon by providing to it the broadcasting of control cells as disclosed by Erami, to the switching fabric in the Blackmon system to help determine unique routes to deliver cells in the fabric.

The motivation to do so is to obtain a fabric that provides data and control paths that allow any failed working card within a protection group to be switchably replaced by another line card to help reduce congestion in the network.

Regarding claim 2, Blackmon discloses wherein the mapping is accomplished without the mapping of physical elements (mapping performed at the line cards is only logical mapping , i.e. mapping is performed with no physical elements , col 3 lines 21-25)

Regarding claim 3, Erami discloses wherein the presence of an element on a given location of the switch fabric propagated to all other elements in the system.

3 (propagated to other elements by the control cell relaying unit, col 2 lines 38-45)

Regarding claim 4, Erami discloses wherein tables are updated by a fabric control cell mechanism.(Fig. 6 shows a table generated by a broadcast routing controller, col 3 lines 17-19).

8. Claims 11, 14, 15,17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US patent No. 6,879,559 (Blackmon) in view of US patent No. 5,765,032 (Valizadeh) .

Regarding claims 11 and 15 , Blackmon discloses switching fabric including mapping means (Figs 1A, 1B and 1C, col 11 lines 23 and 26) and means for broadcasting the mappings (Master processor informs the whole system of the mappings, col 13 lines 37-39, See step 612 in Fig.. 6) ,as in claims 11 and 15.

Regarding claims 14 and 17 Blackmon discloses wherein logical to physical fabric port mapping is managed locally (mapping is done individually at each line shelf. i.e. mapping is managed locally, col 3 line 24)

Blackmon does not specifically disclose the mapping of logical ports to ingress queues, as in claims 11 and 15.

However Valizadeh discloses that multiple channel or Vcs are mapped to a single logical ports (col 5 lines 13-14) and also that that ingress queues are provided for each VC to store cells (col 1 lines 55-56 i.e. then a mapping between a logical port and ingress queues is provided), as in claims 11 and 15.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Blackmon reference by providing the mapping of logical ports to ingress queues as disclosed by Valizadeh, to have the mappings being fully transparent to other switch fabric elements.

The motivation to do so is to obtain a switching system wherein the status of all ports is known and available at any time,

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,879,559 (Blackmon) in view of US patent No. 5,765,032 (Valizadeh) in further view of US patent No. 6,385,200 (Erami).

Regarding claim 18 neither Blackmon nor Valizadeh specifically disclose an ongoing broadcasting of control cells.

However Erami discloses the continuous broadcasting of control cells in an ATM switching network (col 2 lines 15-20) ,as in claim 18.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Calamvokis and Blackmon system by providing the continuous broadcasting of a control cell as disclosed by Erami in order to have a system that constantly and on ongoing basis updates its mappings

The motivation to do so is to obtain switching fabric system that keeps its current mappings updated to reduce the effects of a possible failure in the system.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 5,765,032 (Valizadeh)

Regarding claim 19 , Valizadeh discloses a frame queuing and servicing in the egress direction in a network, discloses that multiple channel or Vcs are mapped to a single logical ports (col 5 lines 13-14) and also that that ingress queues are provided for each VC to store cells (col 1 lines 55-56 i.e. then a mapping between a logical port and ingress queues is provided); and facilitating the mapping (mapping is produced locally i.e. internally within port card 60 in Fig.3), as in claim 19.

Valizadeh does not specifically disclose a machine readable medium to provide instructions, as in claim 19.

However it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the Valizadeh reference by providing a machine readable medium in order to implement, under computer control, a variety of diverse functions in the system.

The motivation to do so is to have a system wherein diverse types of machine readable mediums can be used.

Allowable Subject Matter

11. Claims 24-26 are allowed.

Claims 5-10, 12-13, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

Conclusion

12. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300

(for formal communications intended for entry, for informal or draft communications,
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to 220 South 20th Street, Crystal
Plaza Two, Lobby, Room 1B03, Arlington, Va 22202 (Customer Window).

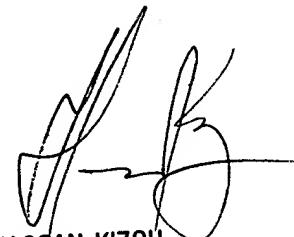
Any inquiry concerning this communication or earlier communications from the
examiner should be directed to **Ricardo Pizarro** whose telephone number is (571) 272-
3077. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:30
PM. .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, **Hassan Kizou** can be reached on (571) 272-3088

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

9/14/05

Ricardo Pizarro



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600